

CLAIMS

1 1. A humidity control system comprising:
2 an inside room humidity sensor;
3 a humidity controller having a selectively actuatable humidity level
4 selection control for selecting a target in-room humidity;
5 an outside temperature sensor circuit; and
6 an outside temperature humidity compensator circuit responsively
7 coupled to said outside temperature sensor circuit and to said humidity
8 controller,
9 whereby sensed outside temperature causes said outside temperature
10 humidity compensator circuit to automatically adjust the target in-room
11 humidity produced by said humidity controller.

1 2. A system as in Claim 1, wherein said outside temperature sensor
2 circuit comprises a thermistor circuit.

1 3. A system as in Claim 1, wherein said outside temperature humidity
2 compensator circuit includes
3 a compensation network including said outside temperature sensing
4 circuit; and
5 an adjustment control circuit.

1 4. A system as in Claim 3, wherein said outside temperature humidity
2 compensator circuit further includes
3 a control switch having a first switch position to select coupling said
4 inside room humidity sensor directly to said humidity controller and having

5 a second switch position to couple said compensation network and
6 adjustment control circuit to said inside room humidity sensor and to said
7 humidity controller.

1 5. A system as in Claim 3 wherein said compensation network includes:
2 an input divider circuit including said outside sensor circuit; and
3 a first compensating circuit coupled to said inside room humidity
4 sensor and to said input divider circuit to provide a first variable bias signal
5 level responsive to outside temperature sensed by said outside temperature
6 sensor circuit.

1 6. A system as in Claim 5, wherein said adjustment control circuit
2 includes
3 an output circuit coupled intermediate said inside room humidity
4 sensor and said humidity controller, said output circuit also coupled to said
5 first compensating circuit, said output circuit to provide an output signal to
6 said humidity controller; and
7 a selectively variable circuit coupled to said inside room humidity
8 sensor, to said outside temperature sensor, and to said output circuit to
9 provide a second variable bias signal level,
10 whereby said output circuit provides said output signal determined by
11 said outside temperature sensed and the setting of said selectively variable
12 circuit.

1 7. A system as in Claim 5, wherein said outside temperature sensor
2 circuit includes

3 a thermistor whose resistive value varies with changes in ambient
4 temperature.

1 8. A system as in Claim 5, wherein said selectively variable circuit
2 includes a first manually adjustable potentiometer.

1 9. A system as in Claim 5, wherein said input divider circuit includes a
2 second manually adjustable potentiometer to provide controlled calibration
3 of said output signal.

1 10. A system as in Claim 1, wherein said outside humidity compensator
2 circuit comprises:

3 a circuit common connection;

4 a power input terminal for coupling to a source of power;

5 a temperature sensitive resistor having a first connection and a second
6 connection coupled to said circuit common connection;

7 a first transistor having a first element coupled to said inside humidity
8 sensor, a second element coupled to said humidity controller, and a third
9 element;

10 a load resistor coupled between said second element and said circuit
11 common connection;

12 a first variable resistor having a wiper element coupled to said third
13 element;

14 a first resistor coupled intermediate said inside room humidity sensor
15 and said first variable resistor;

16 a first diode having a first diode terminal and a second terminal, said
17 first diode terminal coupled to said first variable resistor;

18 a second resistor coupled intermediate said second diode terminal and
19 said first connection;
20 a second transistor having a fourth element coupled to said third
21 element, a fifth element, and a sixth element;
22 a third resistor coupled intermediate said fifth element and said inside
23 room humidity sensor;
24 a fourth resistor coupled intermediate said power input terminal and
25 said sixth element; and
26 a fifth resistor coupled intermediate said sixth element and said circuit
27 common connection.

1 1.1. A system as in Claim 10, and further including

2 a second diode coupled intermediate said second element and said
3 third element.

1 12. A humidity adjusting method comprising:

2 providing selectively reduced signals indicative of sensed indoor
3 humidity levels;

4 sensing changes in outside temperature and developing temperature
5 controlled adjusting signals indicative of such changes; and

6 combining the selectively reduced signals and the adjusting signals for
7 providing output signals for use in controlling the operation of a humidity
8 controller.

1 13. The method of Claim 12, and further comprising:

2 developing a source of setpoint settings and rate of humidity change
3 settings for a predetermined range of outside temperatures and a

4 predetermined range of percentage of humidity changes associated with
5 changes in outside temperature; and

6 selecting the setpoint setting and the rate of humidity change setting
7 from the source of settings for a desired outside temperature range and a
8 desired rate of humidity change.

1 14. For use in humidity control system, an outside temperature humidity
2 compensating system comprising:

3 receiving means for receiving indicators of changes in outside
4 temperature;

5 humidity receiving means for receiving humidity signals indicative of
6 the in-room humidity;

7 reducing means for reducing received humidity signals by a selectable
8 predetermined amount and for providing reduced humidity signals;

9 adjusting means for providing adjusting signals in response to
10 received indications of changes in outside temperature; and

11 outputting means for providing output signals in response to the
12 adjusting signals and the reduced humidity signals,

13 whereby the output signals can be utilized to control a humidity
14 controller.

1 15. A system as in Claim 14, wherein said reducing means includes:

2 rating means for permitting manual selectable settings for defining the
3 rate of percentage of humidity change for a range of temperature changes.

1 16. A system as in Claim 14, wherein said adjusting means includes:
2 voltage dividing means for shifting voltage levels in response to
3 sensed changes in the outside temperature; and
4 voltage adjusting means for providing the adjusting signals in
5 response to changes in the voltage dividing means.

1 17. An outside temperature humidity compensation circuit comprising:
2 a first input circuit for receiving humidity signals from a humidity
3 sensor;
4 a second input circuit for coupling to an outside temperature sensor
5 circuit;
6 a first compensating circuit coupled to said first input circuit and said
7 second input circuit to provide a first variable temperature compensating
8 signals in response to changes in outside temperature;
9 an output circuit; and
10 a selectively variable circuit coupled to said first input circuit, to said
11 second input circuit, to said first compensating circuit, and to said output
12 circuit to provide second variable signals to said output circuit,
13 whereby said output circuit provides said second variable signals
14 determined by changes in outside temperature and the setting of said
15 selectively variable circuit.

1 18. The circuit of Claim 17, and further including a thermistor coupled to
2 said second input circuit.

1 19. A circuit as in Claim 17, wherein said selectively variable circuit
2 includes a manually adjustable potentiometer for adjusting the effective rate
3 of percentage of humidity change.

1 20. The circuit of Claim 17, and further including a control switch
2 coupled between said second input circuit and said output circuit,
3 whereby the compensation circuit can be switch active or inactive.